

Addendum to memorandum comparing FBDG and Nutri- Score algorithm of 26 June 2020

Date: 11 December 2020

1 Introduction

This memorandum is an addendum to an earlier memorandum that made a scientific comparison between the Nutri-Score algorithm on one hand and the nutritional recommendations recently adopted by the Superior Health Council on the other. Specifically, the earlier memorandum dealt with the top nutritional priorities of the Food Based Dietary Guidelines, which help the Belgian consumer to achieve the greatest health gains in terms of nutrition. The memorandum examined whether the Nutri-Score algorithm favours products with whole grains, fruit & vegetables, legumes, and nuts & seeds, as well as those with a low salt content, and gives these products a positive score.

Since whole grains, fruit & vegetables, legumes, and nuts & seeds are top priorities for which the FBDG recommends increased consumption, they are included in the list of "food groups to focus on". In addition to these top priorities, there are also 3 other food groups in the list of "food groups to focus on" (see FBDG, table 7, opposite), i.e. "*milk and milk products*", "*fish, shellfish, and seafood*", and "*oils and derivatives high in omega-3 fatty acids and olive oil*".

The objective of this memorandum is to examine whether the Nutri-Score algorithm also favours the products from the three additional food groups "to focus on" in such a way that they also contribute to the achievement of the FBDG objectives. For this analysis, the Nutri-Scores of different products from the eight food groups to focus on, as indicated by the FBDG, were calculated. This was done on the basis of the average nutritional values of these products, as recorded in the database of <http://www.internubel.be/>.

Te verkiezen voedingsmiddelengroepen

1. Volle granen en afgeleide graanproducten
2. Fruit
3. Noten en zaden
4. Groenten
5. Peulvruchten
6. Melk en melkproducten
7. Vis, schaal- en schelpdieren
8. Oliën en afgeleide producten rijk aan omega-3 vetzuren en olijfolie

2 Synergy for the three additional food groups "to focus on" from the FBDG

2.1 Milk and milk products

FBDG: Milk and milk products are an important source of protein, calcium, vitamin B2, and vitamin B12 and can contribute to a balanced and healthy diet. Consume between 250 and 500 ml of milk or milk products per day

The current Nutri-Score algorithm assigns A and B scores to the different milk and yoghurt products, which is in line with the FBDG. Within the fresh cheeses, it is possible to differentiate; for example, there are fresh cheeses (e.g. semi-skimmed quark) that receive a favourable score. However, the majority of (semi-)hard cheeses receive a D score, which is not in line with the recommendations of the FBDG. Moreover, the algorithm does not distinguish between different (semi-)hard cheeses that differ greatly in nutritional composition.

For example, mozzarella is a soft cheese with 13 g of saturated fat and 626 mg of sodium per 100 g, and receives a Nutri-Score D. This is the same score as for Gouda, which is a hard cheese with a higher amount of saturated fats (17.9 g per 100 g) and more sodium (747 mg per 100 g). Gouda light, with only 11.4 g of saturated fats and 780 mg of sodium per 100 g of product, is also given a D score. So mozzarella and Gouda light contain up to a third less saturated fat than Gouda, but are still indistinguishable from it on the basis of their Nutri-Score.

Categorie	Product	Voorbeeld	Nutriscore	Kernboodschap FBDG
Melk en melkproducten				
Zuivel zonder toegevoegde suiker		Halfvolle melk	A	Melk en melkproducten zijn belangrijke bron van eiwit, calcium, vitamine B2 en vitamine B12
		Halfvolle yoghurt	A	
Zuivel met toegevoegde suiker		Chocomelk	B	
		Halfvolle yoghurt, gesuikerd	B	
Verse kazen		Halfvolle plattekaas	A	
		Mozzarella	D	
Andere kazen		Gouda	D	
		Gouda light	D	

2.2 Fish, shellfish, and seafood

FBDG: Eat fish, seafood, or shellfish once to twice a week, including oily fish once a week.

Fresh fish, shellfish, and seafood such as fresh salmon and langoustines receive an A score. However, smoked and salted fish, such as smoked salmon, only receive a D score. This is despite the fact that the FBDG specifically decided to keep smoked and salted fish in the list of recommended foods.

Categorie	Product	Voorbeeld	Nutriscore	Kernboodschap FBDG
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Vis, schaal- en schelpdieren

Verse/ingevroren vis	Verse zalm	A	Eet één tot twee maal per week vis of schaal-en schelpdieren, waarvan één maal vette vis
Schaal - en schelpdieren	Langoustine	A	
Verwerkte vis	Gerookte zalm	D	

2.3 Oils and derivatives high in omega-3 fatty acids and olive oil

FBDG: To replace hard margarines and butter, give preference to non-tropical oils, spreadable fats, and soft or liquid cooking fats, which have a healthier fatty acid composition for the heart and blood vessels. Choose rapeseed, soybean, and walnut oils.

The consumption of olive oil, particularly extra virgin olive oil, is associated with a lesser incidence of cardiovascular diseases and lower cancer risk.

The final category recommended by the FBDG as a food group to focus on is that of oils and derivatives high in omega-3 fatty acids and olive oil. For this category, it is notable that the products high in PUFAs and omega-3 only receive C–D Nutri-Scores.

An example of a product that is high in PUFAs and omega-3 is linseed oil. Of all the oils high in PUFAs, linseed oil is the highest in omega-3 fatty acids, along with walnut oil, rapeseed oil, and soybean oil, according to the FBDG.

Olive oil high in MUFAs, particularly extra virgin olive oil, is also recommended by the FBDG, yet only receives a C score from the algorithm.

Categorie	Product	Voorbeeld	Nutriscore	Kernboodschap FBDG
Oliën en afgeleide producten rijk aan omega-3 vetzuren en olijfolie				
Vetstof rijk aan PUFA's en omega3		Koolzaadolie	C	Verkijs niet-tropische oliën, smeerbare vetten en zachte of vloeibare bak-en braadvetten ter vervanging van harde margarines en boter
		Lijnzaadolie	C*	
Vetstof rijk aan PUFA's en omega6		Zonnebloemolie	D	
Vetstof rijk aan MUFA's		Olijfolie	C	

*Geen gegevens beschikbaar op <http://www.internubel.be/>; Nutriscore berekend o.b.v. gegevens van op <https://nevo-online.rivm.nl/>

Despite the fact that a C/D score is better than the scores for hard and tropical fats, the algorithm does not sufficiently favour oils and derivatives high in omega-3 fatty acids and olive oil.

Products to limit according to the FBDG	Example	Nutri-Score
Tropische oliën, harde margarines, boter	Vast bak- en braadvet	E
	Kokosolie	E
	Frituurvet	E

3 Conclusion

In this memorandum, we aimed to determine whether there was a positive synergy between the current Nutri-Score algorithm and the objectives of the FBDG with regard to the following groups to focus on: *"milk and milk products"*, *"fish, shellfish, and seafood"*, and *"oils and derivatives high in omega-3 fatty acids and olive oil"*.

We wanted to know whether the Nutri-Score algorithm also favours the products from the three additional food groups "to focus on", in such a way that they also contribute to achieving the FBDG objectives. The consumer benefits from an algorithm that generates scores in line with the dietary recommendations across the board.

From the above analysis, the following main points of interest emerge with regard to the synergy between the FBDG and the Nutri-Score algorithm:

1. For cheeses, no positive synergy was observed between the current algorithm and the objectives of the FBDG: the vast majority of cheeses are only awarded Nutri-Score D. Moreover, the current algorithm does not allow for any distinction to be made between different types of (semi-)hard cheeses with very different nutritional compositions.
2. No positive synergy was found for smoked and salted fish either: although the FBDG include smoked and salted fish in a food group "to focus on", "fish, shellfish, and seafood", they are only given a D score, while the fresh variant is given an A score.
3. Likewise, no positive synergy was found for oils and derivatives high in omega-3 fatty acids and olive oil. They score C–D, which does not favour them sufficiently as a food group to focus on.